

VOLUME 61, NO. 7

SEPTEMBER 2014

THE PULSE

OF LONG ISLAND



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IEEE

IEEE
LONG ISLAND
SECTION

Summer is sadly over, school is starting, and we are returning to normal activities - but a lot of activity has happened since the June **Pulse** was issued. The Nominations committee returned the slate for the 2015 Section elections. The slate is:



Chairman: John Vodopia

First Vice Chair: M. Nazrul Islam

Treasurer: Santo Mazzola

Second Vice Chair: Lou D'Onofrio

Secretary: Marjaneh Issapour

The procedure to add anyone to the ballot is to deliver to the Chairman or to the Nominations Committee Chair (Thomas Lanzisero) a petition signed by at least ten (10) voting members of the Long Island Section.

This petition must be delivered by September 29th. The election will start November 1, and end November 23.

Speaking of voting, please remember to vote in the IEEE Annual Election. You should have received a ballot in the mail, and you can vote online at <http://www.ieee.org/about/corporate/election/index.html> before October 1. Your vote is important, and I think you will recognize some of the names on the ballot. Please support the candidate of your choice!

I was very impressed by the quality of the training and amount of information offered. One of the seminars I attended was presented by Barry Shoop, Professor and Department Head at the U.S. Military Academy at West Point. Barry taught 'Leadership Development for Volunteers', and presented ideas a lot of information on how to be an effective leader, and how to plan and run efficient meetings. He provided a free eBook here: <http://ewh.ieee.org/reg/1/Leadership09.pdf>

A second seminars I attended was 'Recruiting and Volunteer Succession Planning', presented by Tom McKee, a Professional Trainer and Speaker and owner of volunteerpower.com. Tom was also the Keynote Speaker at the Closing Ceremony. I will be writing a more detailed report for the October issue of the **Pulse**, and have asked the other 3 participants to do so as well.

We have a lot of upcoming Section activity in the next few months. Starting off the list is the **First Blind Takeoff, Flight and Landing Milestone Dedication Ceremony** at the Cradle of Aviation in Garden City, on September 24th.

There are three upcoming conferences sponsored by our Section in October:

- **The 2014 International Energy and Sustainability Conference** on October 24th at Farmingdale State College.
- **IEEE NewNEB DC Power Utility Conference & Exhibition**, October 27th and 28th at the Clarion Hotel & Conference Center in Ronkonkoma, NY.
- **11th International Conference & Expo on Emerging Technologies for a Smarter World (CEWIT2014)** on October 29th and 30th at the Marriot in Melville NY.

The Long Island Section PACE is sponsoring the bus and tickets to the **2014 World Maker Faire** on Sunday September 21st. The bus will leave from the Park and Ride lot on the LIE in Melville. The bus can only transport 54 people, so space is limited and first come, first served. Please see the details on page 9, and register at: https://meetings.vtools.ieee.org/meeting_registration/register/27871

The cost is:

\$20 – Active IEEE Student Members, Life Members and young children (2-17)

\$30 – Active IEEE Members and guests of active IEEE members

\$65 – Non IEEE Members

The cost for IEEE members is less than the cost of a ticket alone, and you won't have to drive into Queens and pay for parking! If you have any questions, please contact PACE@IEEE.LI. Remember, space is limited so register now!

The next meeting of the Executive Committee is Monday, September 29th at Telephonics in Farmingdale. The meeting is open to all members— just send me an email at chairman@IEEE.LI and I will add your name to the attendance list.

Region 1 just announced the winner of the Alex Gruenwald Region 1 PACE Award – the Long Island Section! Our PACE program is exceptional (in fact award winning!) and is driven by the PACE Chair, Nikolaos Golas and the Vice Chair, Ahmad Haque.

PACE is the umbrella of a lot of member focused activities, and the PACE Chairs need help - we need people to be part of the PACE committee. The commitment is small – you could take on short term tasks as they arrive that you feel you can commit to. For example, on the Maker Faire bus trip someone has to call the local bus company and make the reservation. A small job, involving a few phone calls.

IEEE Section activities are driven by the Section Volunteers. Please join us!

John G. Schmidt
Chairman, IEEE Long Island Section
chairman@IEEE.LI

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The IEEE Long Island Section Website

The IEEE LI Section website is update regularly to reflect recent section activity and upcoming events. Each Society and Affinity Group has a dedicated page which describes their function and includes contact information.

Visit our site at: www.IEEE.LI

Consultant's Network of Long Island

The Consultant's Network of Long Island maintains a referral service of engineering, computer, managerial & technical professionals. For more information, please visit their website at:

www.consult-li.com

Membership Development

For more information on membership with the Long Island Section of the IEEE, e-mail Nikolaos Golas at:

membership@IEEE.LI



SEPTEMBER 2014

September 3, Wednesday **Long Island Consultants** **Network Meeting**

Briarcliffe College
The Great Room
Bethpage, LI
7:00 PM - Meeting

September 4, Thursday **Instrumentation and** **Measurement Society Meeting**

Telephonics
Farmingdale, LI
6:00 PM - Refreshments
6:30 PM - Lecture

September 21, Sunday **IEEE Maker Faire Bus Trip**

New York Hall of Science
8:30 AM - 6:30 PM

September 24, Wednesday **IEEE Long Island Section** **and AIAA Long Island Section** **Milestone Dedication** **Ceremony for the First Blind** **Takeoff, Flight and Landing**

Cradle of Aviation
Garden City, LI
11:00 AM - Ceremony

For more information
about these meetings and
lectures, please visit:
www.IEEE.LI/calendar



September 29, Monday **IEEE(AES)/AIAA/AFA/AOSNY/** **ASME/ISA Joint Meeting** **Development Of A** **Commercial Crew Space** **Vehicle: The Next Phase**

Bethpage Public Library,
Bethpage, NY
6:00 PM - Social Time
6:30 PM - Pizza
7:00 PM - Presentation

September 29, Monday **EXCOM Meeting**

Telephonics,
Farmingdale, LI
5:45 PM - Dinner
6:15 PM - Meeting

OCTOBER 2014

October 1, Wednesday **Long Island Consultants** **Network Meeting**

Briarcliffe College
The Great Room
Bethpage, LI
7:00 PM - Meeting

October 9, Thursday **PSES Meeting** **New Era in Product** **Safety Labeling,**

By Geoffrey Peckham
UL, Melville, LI
6:00 PM - Refreshments
6:30 PM - Lecture

October 24, Friday **2014 IESC Conference**

Farmingdale State College
Farmingdale, LI

October 27, Monday **EXCOM Meeting**

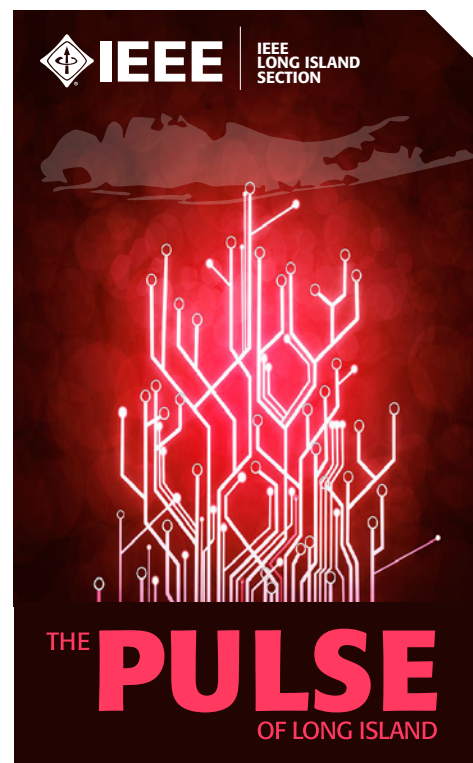
Telephonics
Farmingdale, LI
5:45 PM - Dinner
6:15 PM - Meeting

October 27 28 & 29 **Monday, Tuesday & Weds.** **IEEE NewNEB Conference**

Clarion Hotel
Ronkonkoma, LI

October 29 & 30, **Wednesday & Thursday** **11th International** **Conference and** **Expo on Emerging** **Technologies for a** **Smarter World** **(CEWIT2014)**

Melville Marriott
Melville, LI





Long Island's Electrical and Electronic History

By Jesse Taub, IEEE Long Island Section Historian

We continue to peruse early issues of **The PULSE** and look for those areas that were important to our members shortly after the formation of the Long Island Section. Issues from the early part of 1956 will be this month's focus.

The January issue described a talk on communication using tropospheric scattering. This atmospheric phenomenon was a hot topic then because it was a means of extending the range of UHF communication beyond the traditional line of sight limit. This technique became obsolete once communication satellites were launched which enabled full earth linkage. That issue also advertised a 3-part lecture series on semiconductors which included their physics and transistor circuit design techniques. This was indicative of the need for engineers who were educated to design vacuum tube circuits to learn new skills. Airborne Instruments Laboratory's (AIL) one page ad described consulting activities that they did for the CAA (now the FAA) on air navigation and landing systems.

The advertisements in these old issues sometimes have broader significance. For example, there was an ad for an oscilloscope from a brand new company, Tektronix. Prior to that time, we were all using Dumont oscilloscopes. Tektronix became, and still is, the industry leader in oscilloscopes and many other instruments while Dumont has been out of business for decades.

The February **PULSE** highlighted the monthly meeting topic, "Airport Surface Detection Radar". This newly developed radar was described by D.R. Kirshner of Rome Air Development Center (RADC) and Joseph Woodward of AIL. This radar was installed in the Idlewild Airport (now JFK) and helped to make the taxiing of aircraft much safer.

The feature article was written by Emily Sirjane, who managed the IRE's headquarters office at 1 E.79th Street in Manhattan. She described the way the IRE ran its operation. This was years before they moved to Piscataway. An ad for a direct reading impedance meter from General Radio was of interest to me because, here again, a leading supplier of electronic instruments at that time no longer exists.

The March issue announced the plans for the Section's annual Fellow Awards Banquet. There was only one new Long Island Fellow that year but the program was augmented by honoring five Fellows from European countries. The awards were presented by IRE President Arthur Loughren. At that time, Art was associated with Hazeltine and was a pioneer in the development of color television. The talk featured at the April meeting was Molecular Oscillators and was given by Dr. J. Gordon of Bell Telephone Labs. He had worked with the Nobel Laureate, Charles Townes on the microwave MASER. The MASER invention paved the way for the LASER in 1960.

Another talk was given on radiation detectors by Dr. William Higinbotham of Brookhaven National Laboratory (BNL). BNL is currently a worldwide leader in developing new and better detectors and several of its staff members became Fellows for their work in this area. **The PULSE** also advertised a symposium organized by the Section's Microwave Theory and Techniques professional group on "Microwave Breakdown". We will continue to slowly move up in time as the month's progress. I encourage all of you to read these old issues of **The PULSE** that are available on www.ieee.li website. They continue to deliver interesting insight and broaden our perspective of our profession.

Once again we acknowledge Rod Lowman, our former Historian, for saving these issues and James Colotti, our Webmaster, for scanning them so they can be posted on our website.

THE AMAZING MICROMOUSE MAZE CONTEST

By Donald Christiansen

Student members of IEEE are readying their micromouse entries for contests to be held in several IEEE Regions in 2015. The 2014 Region 1 championship was won by a team of four ECE students from UMass Amherst, who entered a speedy & ingenious maze-solving micromouse named Venus. Second and third places went to teams from the University of Buffalo (with micromouse "Microbull") and Stony Brook University (micromouse "Stuart Little"). In all, teams from 11 colleges participated.

While most of today's many contests held worldwide involve teams of college students, there is a movement to encourage high schools to begin sponsoring contests. In Britain, separate contests for teams of students who are 18 or younger challenge their micromice to follow a line or a wall, while not yet being required to enter an actual maze.

BIRTH OF THE MICROMOUSE

The micromouse was launched in 1977, when, as editor of *IEEE Spectrum*, I was intrigued by the *Machine Design* magazine-sponsored competition, "The Great Clock Climbing Contest," in which mechanical mice powered only by a battery and small electric motor had to climb a vertical mesh "clock," a contest no doubt inspired by the nursery rhyme "Hickory Dickory Dock, the mouse ran up the clock." It occurred to me that real mice were noted for more than running up clocks. Their reputation as intelligent creatures who are particularly adept at finding their way through a maze after exploring various dead ends was well established. Thus, in the May 1977 issue of *Spectrum* I announced The Amazing MicroMouse Maze Contest, challenging readers to design and build a maze-solving mouse to compete in time trials and a capstone contest that we at *Spectrum* would sponsor.

As posed to the readers of *Spectrum*, each micromouse would have its own self-contained logic and memory and would

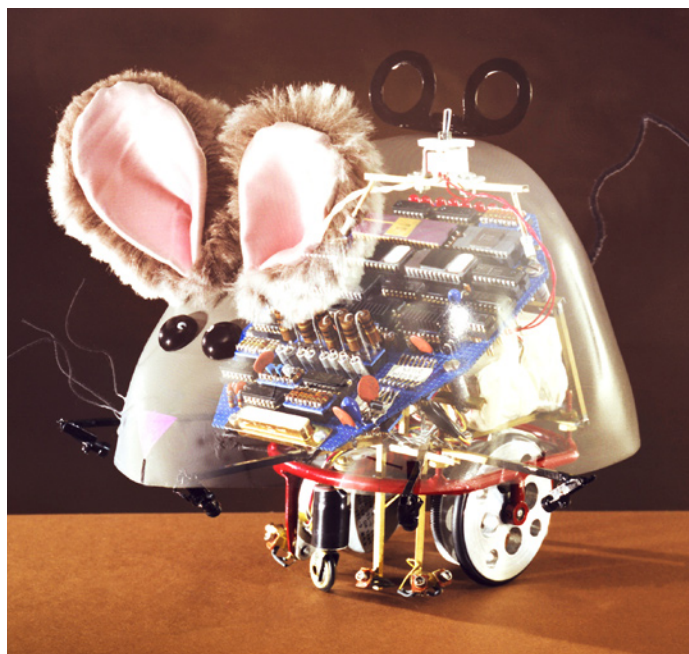
successfully navigate a maze that *Spectrum's* own engineer-editors would design. The configuration of the maze would be held secret until race time. Each mouse would be given an opportunity to probe the maze in test runs, learn from its mistakes, and thereby improve its time in the final run.

Thousands of entrants signed on in that inaugural year of 1977, but at the first time trials only five contestants had entries ready, and only two of the mice got through the maze. As designers and their mice sharpened their skills, however, 15 mice successfully competed in the *Spectrum* finals at the 1979 National Computer Conference.

The finals were covered by CBS, NBC, and ABC television and were reported in the evening newscasts of Walter Cronkite, John Chancellor, and David Brinkley. Press clippings piled up from a broad range of newspapers, from the *International Herald Tribune* to the *Booneville (Missouri) Daily News*. One winning mouse was pictured on the front page of *The Wall Street Journal*.

In the early contests, a few semi-smart mice solved the maze by simply feeling their way along one wall. With due respect for the successful wall-hugging mice, we nevertheless wanted to encourage the design of smarter mice who could map the maze in early runs and avoid repeating missteps in subsequent runs. To discourage wall huggers, I designed a simple "hugger befuddler" that would cause them to loop in circles at the beginning of the maze.

The designers proved to be as creative in naming their micromice as they were in designing and building them. It began with the Battelle team's entries. Moonlight Express, Moonlight Special, and Moonlight Flash were so named because they were built outside regular working hours. Harvey Wallbanger was a four-wheeled wall hugger and successful competitor in the *IEEE Spectrum* contest. Other early contenders were Theseus, Cattywampus, Mazey, and Charlotte. Cattywampus was noted as "an ingenious but noisy specimen," and won a prize for the most original-looking mouse. Charlotte, "The Belle of Philadelphia," featured long, seductive black eyelashes and an Intel 8748 microprocessor. Dudley and Mushka hailed from the University of Waterloo, Canada. Monty Mouse appeared on the British TV show "Science in Action."



"Moonlight Special", a cute and personable entry from Battelle Laboratories, was runner-up in *Spectrum's* best-learning micromouse category.

Continued on page 7 ►

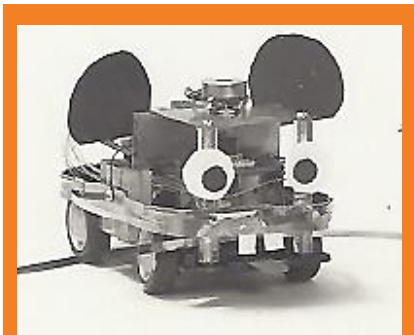
◀ Continued from page 6

Topo, a tiny mechanical wall hugger from Turin, Italy, crossed the Atlantic by himself and was met by a surrogate trainer for his shot at the first *Spectrum* time trials. A family of famous mice from MIT were appropriately named MITee Mouse I, MITee Mouse II, etc.

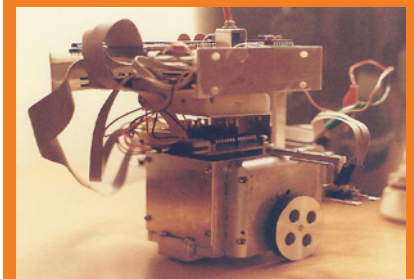
Not every early contender found the going easy. The designers of Theseus reported that the mouse arose "out of endless Saturdays in the lab, numerous burned out semiconductor devices, mangled DIP chips, and shorted power supplies." Monty Mouse's designer reported that at its first run it "thought about where it was and then had a nervous breakdown and started smoking at the edges." Fred, a micromouse from Plessey, gained notoriety for his unintended ability to spin in circles. Infrared sensors were mounted on the ears of Major Tom, but he courted disqualification at his first Wembley contest because of being mistaken for a tomcat. Thumper, a British mouse who participated in the Boston Mouseathon, was slow and lumbering, but talkative, with remarks such as "I will find the shortest route!" and "I hope there are no cats in here." Though a winner in previous contests, Thumper lost out at the Mouseathon when, as one observer put it, he talked his way into a corner.

In just a few years the micromouse challenge had become a worldwide event. In 1980 the first European competition was held in London, followed a year later by one in Paris. Japan announced the first World Micromouse Contest in 1985. In 1987 I was invited to judge the first Singapore Micromouse Contest. That same year the IEE (now the Institution of Engineering and Technology, or IET) hosted an international competition in London.

By the 1990s, the pace and number of micromouse contests had increased dramatically. One online resource reported that "from five or six contests a year there are now over 100." The May 1992 issue of the *Mouser*, a newsletter of the International Micromouse Community, alerted its readers to upcoming contests in London, New Zealand, Hong Kong, and Australia. Micromouse clubs began to appear in engineering schools, and annual contests became regular fare. In the United States, the IEEE and the Computer Society sponsored many of them.



▲ A tiny bug-eyed micromouse.



▲ "Yukon Bob" was an early competitor.

Micromouse mania has continued to spread. Many contests are sponsored by universities and by IEEE Regions. The 28th annual micromouse contest hosted by the Applied Power Electronics Conference and Exposition was held in Fort Worth, Texas, in March, and this year marks the 35th running of the All-Japan Micromouse Robot Contest. Other long-running competitions continue in Mumbai and in Birmingham, England.

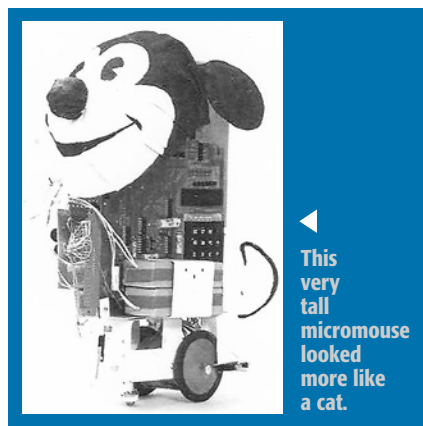
The standard micromouse maze is 8 feet square and consists of a 16 by 16 matrix. Each micromouse is permitted a number of search runs to determine the shortest path to the goal, now usually located at the center of the maze. Scoring is based on both the fastest run and the total time consumed for all runs. Contestants may not communicate with their mice in any way. Parts for a micromouse include a chassis, wheels, stepper motors and motor drivers, onboard wall sensors, microcontrollers, and batteries.

The first micromice were scratch built and thus not uniform in appearance. Some were so tall they teetered at the turns. Monty Mouse appeared to be an aluminum sandwich on wheels. Today, micromouse aficionados no longer need build their mice from scratch. Parts, kits, and complete ready-to-program micromice are now commercially available. Maze walls and

posts as well as parts for a complete maze can also be purchased. Many online sites provide advice and tutorials on building micromice, plus schedules and rules for particular contests. One example site is: www.micromouseonline.com/micromouse-book/rules

Today's micromice are smaller, lighter, and faster, and they can turn more quickly, evoking frequent comments of "Amazing!" from audiences and affirming our propitious choice of that adjective to describe the introductory mouse and maze competition. Participants commend the contests not only for the fun they accord but because the micromice can be seen as a compact system involving many interdisciplinary design challenges. Successful micromouse designers often work in teams, and must consider electrical, electronic, mechanical, and computer issues. Design decisions and tradeoffs involve weight, speed, power, sensing techniques, turning methods, center of gravity, and programming.

Among the non-winners of micromouse contests, many have praised the challenge while cheering their competitors on to victory. One contestant who experienced the agony of defeat said of his design team "We learned much by having to design, create and try." On a personal note he said the micromouse experience propelled his career forward.



◀ This very tall micromouse looked more like a cat.

This article is an updated version of articles appearing in *IEEE Spectrum* (May 2014) and *Today's Engineer* (June 2007)

The author: Don Christiansen is the former editor and publisher of *IEEE Spectrum* and an independent publishing consultant. He is a Fellow of the IEEE and a licensed Professional Engineer.

SEPTEMBER 24, 2014 SAVE THE DATE



You are cordially invited to attend The Long Island Section Institute of Electrical and Electronics Engineers and the American Institute of Aeronautics and Astronautics:

Milestone Plaque Dedication Ceremony of the First Blind Takeoff, Flight and Landing that occurred on September 24, 1929

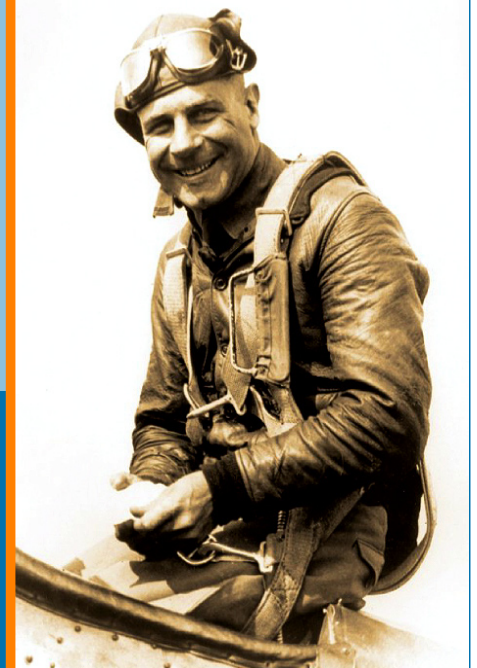
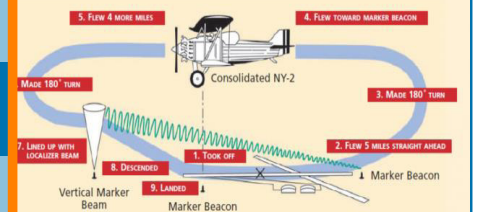
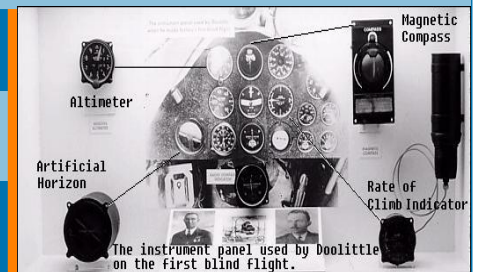
WHEN: Wednesday, September 24, 2014, 11:00 AM

WHERE: Cradle of Aviation Museum, Charles Lindbergh Boulevard, Garden City, NY 11530

Join us as we celebrate the **First Blind Flight** that occurred on **September 24, 1929** when U.S. Army Air Corps pilot, **Lt. James Doolittle**, at the **Guggenheim's Full Flight Laboratory** at **Mitchel Field** took off in a specially instrumented **Army Air Corp NY-22 Husky** aircraft built by the **Consolidated Aircraft Corporation** with **Lt. Benjamin Kelsey** as his safety officer and landed after a fifteen minute, 20 mile, flight without ever seeing the ground. This achievement ended the controversy between "seat of the pants" vs. instrument flying and paved the way for future development of all-weather microwave landing systems.

The achievement of the **First Blind Flight and Landing** was the result of cooperative effort involving the **Daniel Guggenheim Fund for the Promotion of Aeronautics**, the **U.S. Army Air Corps**, the **Department of Commerce**, the **Sperry Gyroscope Company**, the **Kollsman Instrument Company** and the **Radio Frequency Laboratories**.

The milestone plaque will be installed in the **Mitchel Field Flight Safety** exhibit of the **Cradle of Aviation Museum** just a few hundred feet from where the flight's takeoff and landing originated. Save the date for the dedication ceremony commemorating the **85th anniversary** of the event.





The IEEE Long Island Section's Professional Activities Committee for Engineers (PACE) is sponsoring the:

IEEE MAKER FAIRE BUS TRIP



DATE:

Sunday, September 21, 2014

LOCATION:

The **Maker Faire** is on the grounds of the **New York Hall of Science** which is located at 47-01 111th Street, Queens, New York 11368

TRIP AGENDA:

8:30 AM: Depart Park & Ride lot on LIE Exit 49 in Melville

10:00 AM: Arrive at **Maker Faire**, Flushing, NY

5:00 PM: Depart **Maker Faire**

6:30 PM: Arrive at Park & Ride lot on LIE Exit 49 in Melville

COST:

*The cost of the trip includes the bus ride and a ticket to the **Maker Faire**.*

\$20 - Active IEEE Student Members, Life Members and young children (2-17)

\$30 - Active IEEE Members and guests of active IEEE members

\$65 - Non IEEE Members

PICK-UP/DROP-OFF LOCATION:

The pick-up and drop-off will be at the Park & Ride lot on the LongIsland Expressway (LIE) Exit 49 in Melville. The Lot is located on the North Service Rd between Broadhollow Rd (NY-110) and Pinelawn Rd.

ABOUT MAKER FAIRE:

The IEEE Long Island Section's PACE is sponsoring a one-day bus trip to the **2014 World Maker Faire** on Sunday, September 21, 2014 in Queens, NY. The **Maker Faire** is the world's most diverse showcase of creativity and innovation in technology, craft, science, fashion, art, food and more! Part science fair, part county fair, and part something entirely new, **Maker Faire** is an all-ages gathering of tech enthusiasts, crafters, educators, tinkerers, hobbyists, engineers, science clubs, authors, artists, students, and commercial exhibitors. All of these "makers" come to **Maker Faire** to show what they have made and to share what they have learned. This is a family-friendly Faire.

From needle arts to robots, the **Maker Faire** projects cover all shapes and sizes. The larger ones include demonstrations of 100 + spouting bottles of Diet Coke & Mentos candies, a Trapeze and a full-size replica of the famous "Mouse Trap" game where the "trap" is a massive weight that crashes down through the roof of an old automobile. Most projects, are on a smaller scale and cover the entire spectrum of available technologies including crafting, renewable energy, robotics, materials and micro-controllers to name a few. Among the most popular devices are 3D printers, quad-rotor drones and ready-to-use computer boards like the Raspberry Pi and Arduino.



**World Maker Faire
September 20 & 21**

REGISTRATION:

Click the registration link on this page to sign up for the trip. You will be guaranteed your seat on the bus by making payment. Pay via PayPal when you register. Alternatively, a check may be mailed to: **Metodi Filipov**, Treasurer, IEEE Long Island Section, 31 McCall Ave, West Islip, NY 11795-4334. Make checks payable to the **IEEE Long Island Section**.

REGISTER ONLINE HERE:

(click here to register)

Your payment must be received by Monday Sept. 15th at 5:00PM. Note:

This is on a first-come-first-serve basis. We will be creating a **Waiting List** to accommodate attendees if the amount of attendees exceeds the capacity of the bus. No refunds unless we sell your seat(s).

IEEE EVENT COORDINATOR

Mr. Ahmad Haque,
Vice Chair PACE (Professional Activities Committee for Engineers), IEEE LI Section.
Please contact via e-mail at: PACE@IEEE.LI



OCTOBER 7, 2014

IEEE DAY

**LEVERAGING TECHNOLOGY
FOR A BETTER TOMORROW**

IEEE Day 2014 is the 5th time in history when engineers worldwide will celebrate the anniversary of the first time IEEE members gathered to share their technical ideas in 1884. While the world benefits from what's new, IEEE is focused on what's next. We're looking for volunteer nominations from your section to help:

- Plan and Submit Your Event to our IEEE Day Team
- Promote Your Event (Section Newsletter, Region/Section website, local newspapers, student branches, company intranet)
- Have your event pinned to the global map
- Participate in the photo contest
- Member Engagement/Networking through participation
- Partner with your IEEE Day Ambassadors -responsible for increasing motivation to celebrate IEEE Day in your section /student branch/society/chapter
- Perfect opportunity for Membership Development

IEEE DAY PROMOTION:

\$30 off NEW higher grade members that join between 5 October & 11 October using promotion code **IEEEDAY14** (*not applicable to student membership*)

For volunteer nominations or questions e-mail us at: IEEEDAY2014@IEEE.ORG

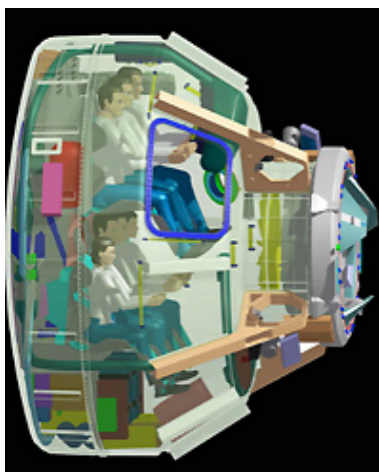
Follow us on our Social Media sites: <https://www.facebook.com/IEEEDay> Twitter and LinkedIn Sites COMING SOON





IEEE(AES)/AIAA/AFA/AOSNY/ASME/ISA JOINT MEETING

DEVELOPMENT OF A COMMERCIAL CREW SPACE VEHICLE: THE NEXT PHASE



DATE: Monday, September 29, 2014

PRESENTED BY:

Dr. Michael Kezirian

Associate Technical Fellow, Boeing Company, Adjunct Associate Professor, Department of Astronautics, USC

LOCATION:

Bethpage Public Library

47 Powell Avenue, Bethpage, NY, 11714

TIME:

6:00 PM - Social Time

6:30 PM - Pizza

7:00 PM - Presentation



Before the date of this meeting, NASA will have announced phase II of the Commercial Crew Transportation Capability (CCtCap) Program. Boeing has been one of three companies under Phase I NASA contracts to develop a crew carrying vehicle that will provide US capability for safe, reliable and cost effective access to low-Earth orbit including the International Space Station (ISS) with a goal of first crew flight no later than 2017. Currently there are three funded first phase projects: Boeing CST-100 (Crew Space Transportation) Capsule; Sierra Nevada Corporation DreamChaser; and SpaceX Dragon V2.0. NASA funding for at least one of these projects will not be continued. Additionally, Blue Origin is developing an orbital Space Vehicle, without NASA funding. This talk will provide an overview of the Commercial Crew Program with an emphasis on the capabilities of the Boeing CST-100.

Dr. Michael T. Kezirian received his Bachelors from Brown University and his Doctorate from MIT, both in chemical engineering. He has been a propulsion analyst at TRW Space and Technology Group (now Northrop Grumman) and later built software algorithms for spacecraft autonomy at the Hughes Space and Communication Group (now Boeing). At Boeing, he has worked on commercial and government communication satellite programs, and has supported human spaceflight in both the Space Shuttle and ISS Programs. Now an Associate Technical Fellow at Boeing, he is working on the design of the CST-100. At USC, he teaches "Safety of Space Systems and Space Missions." Dr. Kezirian has received numerous honors and awards; in 2009 he was awarded the Astronauts' Personal Achievement Award, or Silver Snoopy award.

COST: Members & Guests- \$5, Students- Free

RESERVATIONS REQUESTED RSVP BY

September 28, 2014 to: David Paris at:

davidsparis@optonline.net or (516) 458-8593

Directions: The library is west of Route 135 in Bethpage. Take Route 135 to Exit 8, then West on Powell Ave. for about 0.25 miles. The library is on the south side of the street. Park across Powell Ave., opposite the library.



The Long Island Chapter of the
IEEE Product Safety Engineering Society
is presenting a lecture titled:



THE NEW ERA OF PRODUCT SAFETY LABELING

DATE:

Thursday, October 9, 2014

PRESENTED BY:

Geoffrey Peckham,
Clarion Safety Systems

LOCATION:

Underwriters Laboratories
1285 Walt Whitman Road,
Melville 11747

TIME:

6:00 PM - Refreshments
6:30 PM - Lecture

COST:

*The lecture is free and
all are invited.*

REGISTRATION:

Registration is required,
and is available online only.
Please visit the calendar page
of the IEEE Long Island
Website, www.ieee.li click
on the registration link, and
fill out the form.

ABSTRACT:

This presentation will focus on what product design engineers need to know about the latest ANSI & ISO product warning label standards. The legal, risk and safety ramifications of product safety labels are of paramount importance to today's forward-thinking manufacturers. People's lives, product liability lawsuits and company futures are literally on the line when it comes to the quality of the safety labels placed on your products. The choice of format, the degree of content and the durability of materials used in their construction are all key to getting this job done right.

SPEAKER BIOGRAPHY:

Geoffrey Peckham, chairs both the ANSI Z535 committee (the committee in charge of the principle US standards for safety signs, tags, colors, symbols and product safety labels) and the US ANSI TAG to the ISO committee responsible for the international standards related to these same subjects, ISO/TC 145. Mr. Peckham is CEO of Clarion Safety Systems, a company which has specialized in developing customized product safety label systems for manufacturers for 25 years

LOCATION:

This lecture will be held at Underwriters Laboratories located at 1285 Walt Whitman Road, Melville. Please park in the lot behind the building and enter in the back of the building. Refreshments will be served starting at 6:00 PM, and the presentation will begin at 6:30 PM. (Please try to join us early and enjoy networking with your colleagues.) The lecture is scheduled to last 60-90 minutes.



LECTURE COORDINATORS

James Colotti,
Safety Chairman of the IEEE LI Section
safety@IEEE.LI

Glenn Luchen,
Safety Vice Chairman of the IEEE LI Section
safety@IEEE.LI



International Energy & Sustainability Conference 2014, October 24, 2014

The third International Energy and Sustainability Conference will be held in October 2014 at Farmingdale State College.

The conference will bring together the latest research and development works in energy and related topics, along with industrial and management issues and challenges. Experts in research as well as in industry will be invited to present the emerging technologies and future directions in their field. Prospective authors are invited to submit original technical papers for presentation at the conference.

IMPORTANT DATES

Abstract submission	May 15, 2014
Accepted abstract notification	June 15, 2014
Deadline for accepted papers	September 5, 2014
International Energy and Sustainability Conference 2014	October 24, 2014

For more information send your inquiries to smartgrid@farmingdale.edu.

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Papers to be submitted by 7/7/14
Paper acceptance by 8/4/14
Final papers submitted by 8/25/14
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User's Forum:

Uniquely designed for electric utility users only... NO commercial or vendor influence! The user's forum will consist of a session where specific topics of importance to the Utility users will be discussed. The User's Forum will be led by utility DC professionals Who will provide guidance and support to the forum. Further, a moderator will Be used to ensure that the meeting is kept on tract and garners the appropriate Questions for further debate. This will allow the users to pose relevant questions And concerns to the suppliers present and to the regulators in the form of follow up Correspondence sent by the AI New NEB management and to the industry at large Through neighboring and its regular communications.

This year's conference is focused on system reliability and the influence of the NERC requirements in shaping The utility DC system. We will draw from the industry at large, regulators, rule makers, utilities, manufacturers, educational institutions, and consultants to provide qualified speakers.

AI/NE MA PEN 5 working group session added on Wednesday morning October 29, 2014. Be sure to register for This important event. This is a very exciting and much needed update effort for NE MA Pen This document has Not been revised or even reviewed since 2003!





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The 11th International Conference and Expo on Emerging Technologies for a Smarter World (CEWIT 2014)

Conference: CEWIT 2014

**OCTOBER 29 & 30, 2014,
MELVILLE MARRIOTT LI, MELVILLE, NEW YORK**



SCOPE OF THE CONFERENCE

We cordially invite you to submit your contribution to the 11th International Conference & Expo on Emerging Technologies for a Smarter World (CEWIT2014). Originally known as the International Conference on Cutting-Edge Wireless & Information Technologies, this conference is organized by the New York State Center of Excellence in Wireless and Information Technology (CEWIT) located at Stony Brook University in New York.

CEWIT 2014 is the premier international forum on the applications of emerging technologies in infrastructure, healthcare, and energy, which are three of the most critical components of a smarter global environment. Specific topics of interest include, but are not limited to, the following:

AREA 1

- The Internet of Things (IoT)
- Wireless Sensor Networks
- Intelligent Sensors/Devices
- Collaborative Signal/Image Processing
- IoT Applications and Services
- Device and Circuit Design for IoT
- Architecture and Systems Design for IoT
- Interface and Control Systems for IoT
- IoT Data Analytics
- Mobile IoT
- IoT Testbed and Standards

AREA 2

- Networks and Security
- Cloud Infrastructure Management
- Cloud Infrastructure Security
- Cloud Interoperability
- Cloud Benchmarking
- Trust & Policy Management in the Clouds
- Privacy -Preserving Policies
- Security Architectures
- Pervasive Computing
- Intelligent Service Robots
- Parallel Computing

AREA 3

- Health Technologies & Medical Devices
- Advanced Medical Imaging
- Computer-Aided Diagnostics
- Wireless Telemedicine
- Noninvasive Health Monitoring
- Teleradiology
- Personal Medical Devices
- Implantable Sensors
- Medication Adherence
- Tracking and Monitoring
- Mobile Diagnostics
- Implantable Prosthetics

AREA 4

- Big Data Analytics and Visualization
- Model Driven Data Analysis
- Data Mining in Business Intelligence
- Text Mining & Sentiment Analysis
- Visual Analytics
- Biomedical and Healthcare Informatics
- Distributed Robotics & Real-Time Data Analytics
- Virtual and Augmented Reality
- Immersive Interface
- Tiled Displays
- Human Computer Interaction
- GPU Clustering

AREA 5

- Smart Urban Systems & Smart Energy
- Securing the Transportation Infrastructure
- Transportation Infrastructure Sensing
- Traffic Simulation & Visualization
- Interaction: Vehicles & the Environment
- Integrated Management Technology for Ubiquitous City
- Distributed Sensor Networks for Smart Grid
- Advanced Metering Infrastructure
- Energy Efficient Computing
- Advanced Sensor & RFID Technologies
- Smart Grid Interoperability
- Simulation and Modeling

AREA 6

- Information Technology and Society
- Worldwide Economic Impact of IT
- IT in Education
- IT as the Job Creation Engine
- Social Media
- Information Dissemination
- Global Impact

For **CEWIT 2014** Conference information, visit www.cewit.org/conference2014



EMBS MICRO & NANOTECHNOLOGY IN MEDICINE CONFERENCE

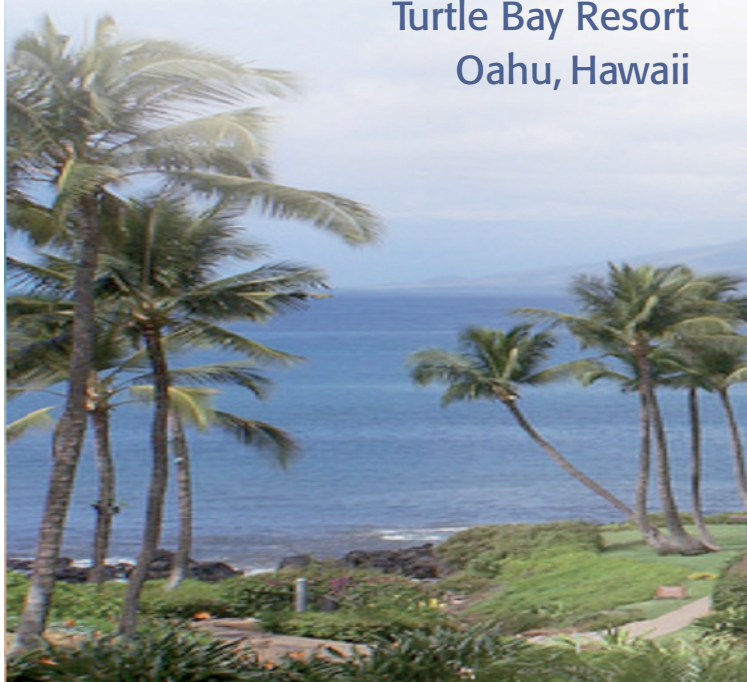
TRANSLATING TECHNOLOGY FROM THE BENCH TO THE BEDSIDE



MNMC 2014

8-12 December 2014

Turtle Bay Resort
Oahu, Hawaii



Various biomedical grand challenges facing our society and the world can be addressed by interfacing biology and medicine with Micro and Nanoscale technologies. These technologies hold great potential to impact early diagnosis, therapeutics, and management of disease. IEEE EMBS is sponsoring the second biennial Conference on Micro and Nanotechnology in Medicine to foster interaction between scientists, engineers and medical researchers in the context of real-world medical needs and issues. The Conference will promote vigorous and open dialogue towards the development of cutting edge technologies for faster, more quantitative, and less expensive biomedical solutions using advances in Micro and Nanotechnology. For more details, please visit: www.mnm.embs.org/2014/

KEYNOTE SPEAKERS



Joanna Aizenberg
Harvard University



Joseph DeSimone
University of North Carolina



Chad Mirkin
Northwestern University



Buddy Ratner
University Of Washington



Sangeeta Bhatia
Massachusetts Institute
of Technology



Luke P. Lee
University of California,
Berkeley

KEY DATES IN 2014

Final Submissions Due

6 October 2014





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IEEE
Signal Processing Society



IEEE International Symposium on Biomedical Imaging

APRIL 16th - 19th, 2015, BROOKLYN, NY USA

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d.bernstein@ieee.org

The IEEE International Symposium on Biomedical Imaging (ISBI) is a premier interdisciplinary conference encompassing all scales of imaging in medicine and the life sciences. The 2015 meeting will continue its tradition of fostering knowledge transfer among different imaging communities and contributing to an integrative approach to biomedical imaging across all scales of observation.

ISBI is a joint initiative from the IEEE Signal Processing Society (SPS) and the IEEE Engineering in Medicine and Biology Society (EMBS). The 2015 meeting will open with a morning of tutorials, followed by a scientific program of plenary talks, invited special sessions, challenges, as well as oral and poster presentations of peer-reviewed papers.

High-quality papers are requested containing original contributions to mathematical, algorithmic, and computational aspects of biomedical imaging, from nano- to macro-scale. Topics of interest include image formation and reconstruction, computational and statistical image processing and analysis, dynamic imaging, visualization, image quality assessment, and physical, biological, and statistical modeling. We also encourage papers that elucidate biological processes (including molecular mechanisms) or translational ramification through integration of image-based data. Accepted 4-page regular papers will be published in the symposium proceedings & included in IEEE Xplore.

To encourage attendance by a broader audience of imaging scientists (in particular from the biology, radiology, and physics community) and offer additional opportunities for cross-fertilization, ISBI will again propose a second track featuring posters selected from abstract submissions without subsequent archival publication.

IMPORTANT DATES

JUNE- SEPT. 2014: Tutorials, Special, Sessions & Challenges Proposal Submission

AUGUST 1 - NOV. 10 2014: 4-Page Paper Submission

NOV. 20 - DEC. 20 2014: 1-Page Paper Submission

Venue: ISBI 2015 will be held at the **Marriott hotel at the Brooklyn bridge**, located on Adams street, next to the historical Court House building, with premier shopping, dining, and attractions in the heart of the Dumbo district. A short walk will take you to eight subway lines, a city bike station or a yellow cab to explore Brooklyn or to reach Manhattan just 1.5 miles (2 subway stations) across the East river for memorable nights in the Big Apple.

<http://biomedicalimaging.org/2015>



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**April
24-26
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www.downstate.edu/orthopaedics/bioethicsconf2015

❗ Call for Abstracts

The program committee is seeking abstracts submission of paper relevant to this conference, which will be evaluated for inclusion in the final agenda as Oral presentations. The Deadline for abstract submission is **November 26, 2014**. Notification of abstract acceptance December 15, 2014. Selected papers will be published in the Ethics in Biology, Engineering, and Medicine: An International Journal.

An approximately 200-300 word single spaced abstract, text only, should be typed in font size No. 12. It should be typed on 8 1/2 x 11-inch paper with one-inch margins. The preferred way is to E-mail your abstract, followed with a hard copy. In your cover letter, please identify the corresponding author with complete mailing address, telephone number and E-mail address.

SUGGESTED TOPICS FOR PRESENTATIONS

- * ETHICS IN BIOENGINEERING
- * ETHICAL ISSUES IN BIOMEDICAL RESEARCH
- * ETHICS IN NANOBIO TECHNOLOGY
- * ETHICS IN GENETIC ENGINEERING and CLONING
- * ETHICS IN STEM CELL RESEARCH
- * RESPONSIBLE CONDUCT IN RESEARCH
- * ETHICS IN SYNTHETIC BIOLOGY
- * ETHICS IN MEDICAL RESEARCH
- * MEDICAL ETHICS & HEALTH POLICY
- * ETHICAL ISSUES IN TISSUE ENGINEERING
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Invited Speakers:

George Khushf, PhD
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Kenneth R. Foster, PhD
University of Pennsylvania
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Registration:

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Guest Banquet Ticket: \$50

(After March 1st, 2015)
Registration Fee*: \$250
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(does not include banquet): \$200
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Guest Banquet Ticket: \$50

Conference Site

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